ABSTRACT OF THE DISCLOSURE

[0080] A silicon-containing alumina support, a process for preparing the support, and a catalyst containing the support are provided. The alumina support includes an additive silicon enriched on its surface, with the difference between the atomic ratio of silicon to aluminum on the surface of alumina support and that of the alumina support is at least 0.10. The process for preparing the silicon-containing alumina support comprises adding a nanometer silicon compound. The inventive alumina support can be used in manufacturing a catalyst for hydrotreating hydrocarbons with good physico-chemical properties and performance.